I. Project Title and Project Purpose Statement

Title: *Community-led mapping for environmental accountability in Grand Bois, Louisiana*

Location: Grand Bois, Louisiana

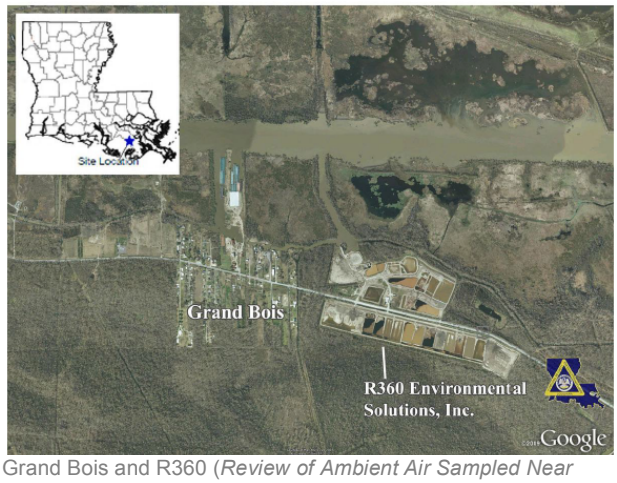
Related environmental statute(s): Clean Water Act, Section 104(b)(3)

Project Summary: Public Lab, in partnership with Guardians of the Land and Water, will train community members and concerned residents to monitor water quality issues around Grand Bois using simple, inexpensive tools and techniques. The project will build capacity in this underserved community plagued by industrial toxics for citizen-led monitoring of water quality issues related to runoff at an adjacent 140 acre oil and gas treatment and waste storage facility. Residents will learn how to use simple tools and open source software to document waste overflow events in order to better demand accountability for a healthier community. Additionally, residents will receive advocacy training, learning how to best use the data they collect to advocate for greater polluter accountability. Through this project, residents will be introduced to basic STEM concepts through real life application and investigation for sustained engagement in local environmental issues.

Training will educate Grand Bois residents about the use of Public Lab's open source DIY mapmaking toolkit, a proven method for creating high resolution, community-informed maps using DIY "satellites," handheld digital cameras tethered to kites and weather balloons. After receiving training, community members and volunteers will collect information and imagery surrounding their community and the oil and gas waste facility once per quarter to obtain seasonal baseline data. In the event that a major high water event occurs during the term of the grant, participants and the project manager will collect data in order to document waste site overflows. They will then compile the information using open source software created by Public Lab into comprehensive, data-rich maps of the site. Residents will also be trained in data interpretation, sharing, and advocacy, skills they will then use to work with local groups and legislators to continue their fight for a cleaner, healthier community.

II. Environmental, Public Health, and Community Climate Resiliency information

Grand Bois, "Big Woods," is a small community in south Louisiana between Bayou Lafourche and Bayou Terrebonne in the heart of the Mississippi River Delta's Barataria-Terrebonne National Estuary. Tall, virgin, bottomland hardwood and cypress forest once grew along the ancient and forgotten deltaic ridge, where generations of American Indian and Cajun families made Grand Bois their home.



Grand Bois and R360 (*Review of Ambient Air Sampled Near R360 Environmental Solutions, Inc.*, LA Dept. Of Health and Hospitals, 2011).

The 2010 census reported a total population of 2,579 within Bourg, Louisiana. Grand Bois falls within the Bourg jurisdiction and is estimated to have approximately 300 individuals living in the community. 90.7% of the Bourg population identified as Caucasian, 6.5% American Indian and Alaskan Native, 1.9% identified as belong to two or more races, 1.1% as Latino/Hispanic, 0.5% identified as African-American, and 0.1% identified as Asian. Only 43.2% of the population is estimated to have earned a high school diploma. The median household income was $56,797. Sales and office

work, natural resources, construction, maintenance, business, and management occupations were predominant.

Located less than 60 miles from New Orleans, the community is bordered by the manmade Gulf Intracoastal Waterway (GIWW) to the north; to the south, wetlands are disappearing at some of the fastest rates on the planet; to the east, cattle pastures, sugarcane fields, remnant forest, and orange groves reflect picturesque Louisiana landscapes. At the western edge, less than 800 feet from Grand Bois, is a 140-acre exploration and production waste facility with capacity to take in a million barrels of oil waste per year. The facility, then known as Campbell Wells, since owned by US Liquids, is currently operating as R360 Environmental Solutions, Inc. (R360).

In 1984, Non-hazardous Oilfield Waste was permitted to be disposed into open-air, exploration & production waste treatment cells adjacent to the Grand Bois community at R360. A decade later, community members began getting sick after a convoy of hazardous oilfield waste was transported from Alabama and disposed of in Grand Bois. The community settled with the sites owners in 1998 with the agreement that the two closest cells would be closed and that fifteen-foot berms would be built around the remaining cells.

Despite this, the R360 is still in operation, and has the ability to accept oilfield waste via truck or barge, and is permitted by Louisiana Department of Environmental Quality (LDEQ) to release up to 2-dozen tons of VOCs, including 1/2 a ton of benzene, each year. R360 treats waste that commonly contains VOCs, PAHs, hydrogen sulfide, acids and alkalis, heavy metals, salts, glycols, and amines. Treatment consists of a series of shallow, open-air ponds that have resulted in two decades of concern by Grand Bois residents over bad odors, oil sheens, dust, and the resulting health impacts. In addition to the waste cells and ever growing pile of reuse material, there are also four injection wells permitted on site. Homes are located less than 800 feet from the site perimeter, putting the community at risk for exposure to carcinogens including benzene, chlorides and chloroform.

Only a few decades ago, Grand Bois was considered the high ground where relatives living in more southern coastal communities, such Pointe aux Chenes, would retreat during hurricanes. Due to manmade canals, such as the GIWW and other oil and gas exploration and production canals, in addition to earthen levees built around surrounding communities redirecting hydrology, Grand Bois residents now feel they are being flooded out and lack protection. A major concern of residents is the flooding of the R360 site during heavy rain and high water events. During high water events it is believed that the waste mixes in with floodwaters through overflows and/or is purposely discharged into the GIWW and the St. Louis Canal. Grand Bois residents have complained that they can see the waste in the water but lack the tools needed to document where it is coming from as a first step in making a case for more rigorous testing of the water.

Implication of contamination of the GIWW and St. Louis Canal are now even greater, as a coalition of unlikely partners (including Apache Corporation, Ducks Unlimited, Lafourche-Terrebonne Soil and Water Conservation District, Louisiana Coastal Protection and Restoration Authority, ConocoPhillips, Entergy, ExxonMobil and TransCanada) have come together for a major wetland restoration project just south of Grand Bois. In an attempt to rebuild wetlands that act as a buffer between Grand Bois and the Gulf of Mexico, this coalition has planned a Freshwater Introduction Project to connect the GIWW to the old St Louis cypress-logging canal near the R360 facility. The freshwater diversion will deliver critical nutrients and sediment to the recovery zone. Unfortunately, this also means that anything in the water around R360 will now head downstream to a critical and delicate wetland.

Adding to concern is the fact that, as an exploratory and production waste facility, R360 is exempt from Resource Conservation and Recovery Act regulations and reporting requirements under the Toxic

Release Inventory, and only recently received a minor source air quality permit after over 20 years of operating without one. However, due to community complaints, grab sample air quality testing was done by the LDEQ in 2011 highlighting three issues of concern, including elevated levels of benzene, increased cancer risk, and chlorinated compounds detected near R360.

The report acknowledged that LDEQ testing did not tell the whole story at the R360 site because of the resolution of the data collected, stating that, "The estimated cancer risks for data from June 2011 were based on a small number of samples collected over a short period of time and may not reflect actual long-term exposures." This rings true for residents of Grand Bois whose residents still complain of water contamination, acrid air, sinus pain, throat irritation, burning eyes, respiratory issues, lightheadedness, headaches, eye and throat irritation, nausea and burning eyes. Additionally, cancer rates within the community are high. Residents are now pushing for more regular testing to be carried out, as well as testing during weather events that exacerbate conditions, especially high water events when the site floods.

III. Organization's Historical Connection to the Affected Community

As a resident of Grand Bois with generations of familial history at the site, Clarice Friloux has been fighting for healthier air and water for her community for over two decades. As a member of the United Houma Nation Native American tribe, she has worked tirelessly to bring attention to the plight of her community, earning coverage both locally and nationally, including a one-hour special on CBS highlighting the situation in Grand Bois. In 2012, Friloux launched Guardians of the Land and Water in a renewed effort to bring attention to the situation in her community. Fellow environmental activists and Houma nation cousin, Monique Verdin, has been supporting the work of Friloux and the Guardians to find innovative solutions for the community, and has been an active voice in documenting and sharing the situation in Grand Bois.

Friloux and Verdin heard about Public Lab through a number of community gatherings and local partners throughout 2014, sparking interest in ways they might use Public Lab tools to monitor Grand Bois. Verdin actively participated in Public Lab throughout 2014, sharing her knowledge of storytelling and documentary filmmaking and attending Public Lab's annual conference in 2014. In the winter of 2014, Verdin requested assistance from Public Lab to help do aerial surveys of a 1,000 year old Native American mound site in the fragile marsh near Cocodrie, where her and Friloux's grandfather is said to be buried. This initial project demonstrated to Friloux and Verdin the possibilities of Public Lab's tools, and has spawned a number of discussions between the groups as to how Public Lab tools can help protect and monitor the Houma homelands and waters in the Mississippi River Delta.

Public Lab has been consistently impressed and inspired by Friloux and Verdin's work and drive. As an organization that emphasizes community ownership of monitoring, Public Lab has been working with Guardians of the Land and Water to build engagement and training opportunities for the residents of Grand Bois. As a next step, the groups are working together in early 2015 to pilot test Public Lab's Oil Test Kit, a novel, inexpensive method for classifying oil contamination found in water. The kit has the potential to help residents better understand the contaminants in their bayou and will allow for frequent sampling and data collection. Regular mapping of Grand Bois will give residents a tool to visually display data collected using the oil test kit and will provide information of it's own helping Grand Bois bring regulatory attention to the 140 acre oil waste site adjacent to their homes. The ideal end goal from this partnership is that 30+ residents have the tools and skills they need to regularly collect data about their environment, and that these residents can work together to understand their data and advocate for a more responsible, proactive industrial neighbor.

IV. Project Description

Project overview:

The primary result of this project will be that residents of Grand Bois better understand and have detailed documentation of industrial contamination and runoff from a neighboring oil and gas facility, especially during high water events. This will be an important step for the community toward making a case for more rigorous monitoring of waste pits adjacent to the community. The project will achieve this by building community engagement and capacity in assessment and monitoring of the bayou surrounding Grand Bois using innovative technologies in citizen science to introduce residents to simple, inexpensive, environmental monitoring tools and techniques, using the local bayou as an ongoing research sites for community-led investigation. The project will engage residents in conversations about the importance of aquatic ecosystem health and how it relates to community health and well being, as well as implications related to climate change, human health, floodwater management, and recreation. This project both expands the conversation about environmentalism in a region with complicated ties to the oil and gas industry and advances STEM knowledge and innovation in an underrepresented community.

This project has four mutually reinforcing objectives:

- Address a critical local water quality issue that residents believe is negatively impacting human health;
- Build local capacity such that residents are able to affordably undertake regular monitoring of the site of concern;
- Support community priorities related to human and environmental health, as well as economic well-being of the community;
- Involve underserved communities in the advocacy and decision making process.

Project activities:

Project implementation will consist of five activities, described in detail below.

Common balloon mapping supplies (*Courtesy of Public Lab contributor hudonnoodles*)

1. Planning: During Quarter One of the project we will complete project planning, including initial community outreach with the assistance of Guardians of the Land and Water, refinement of existing training materials as necessary, and evaluation planning. We will work with local residents and Guardians of the Land and Water to identify interested participants and groups. We will begin the process by leveraging personal connections of Guardians of the Land and Water and Public Lab, and by contacting residents previously interested in or involved in improved monitoring of the R360 facility. Additionally, we will put in place logistics for project workshops, including securing workshop space and dates, preparing materials, and advertising locally.
2. Outreach and engagement: Outreach and community engagement will begin in Quarter One and continue through Quarter Three of the project. Project Manager and Public Lab Outreach Manager Ellen Lewis will work in partnership with Guardians of the Land and Water, and through existing relationships and contacts, to identify interested community organizations and individuals. As a

lifelong resident and advocate for Grand Bois, Friloux's connections will be vital in identifying interested residents. Additionally, Guardians of the Land and Water will reach out to local high school students as potential participants in this project. Through meetings, phone, and email contact, Friloux and Lewis will establish interest and track follow up steps for participation. As Grand Bois is a small, tightly knit community, personal contact will be key in recruiting participation in the project.

3. Monitoring and advocacy training: Monitoring and advocacy training activities will include one workshop each in Quarters One and Two of the project in partnership with Guardians of the Land and Water. Each training will be one-half day and will begin with introductions and an overview of the projects, including a space for community members to present their personal concerns regarding environmental health. As a group, participants will outline 1-3 goals for the project. In Workshop #1, we will present an overview of relevant STEM topics, and a tailored view of Public Lab methodology, showing case studies of existing projects as well as introducing traditional mapping concepts in accessible, non-technical language. We will then provide training on how to assemble the aerial imaging hardware, which consists of a handheld digital camera, housing made from a 2 liter soda bottle, and kite or weather balloon. Training will include basic concepts on safety, design and repair, and data recording. We will divide into small groups, each with an experienced mapper, and head to strategic locations around the site to capture aerial imagery and on-the-ground data of relevance. Once images have been collected, participants will sort the images for usability, including examining photos for clarity, angle, and relevance.

4. For Workshop #2, we will use the images collected during Workshop #1 to host an in-person image stitching training session. Participants will learn to use Public Lab's open source software, MapKnitter, to georectify, stitch, annotate, and interpret maps using the images collect and sorted in Workshop #1, creating a comprehensive visual of their aerial and on the ground data. The second half of Workshop #2 will include a session on using data for advocacy based on the expertise of Public Lab's Data Ambassador. In this session, participants will work together to decide how to best use the techniques they have learned to advocate for better regulatory enforcement and increased monitoring of R360. Additionally, participants will revisit the goals they set in Workshop #1 to see if priorities have shifted or need to be added based on what they learned throughout the workshops. Finally, the group will plan three additional mapping outings based on lessons learned from the first mapping and strategies developed through the workshops.

5. Implementation: In the months following training, project participants will complete three additional mapping outings around Grand Bois in order to capture imagery of R360 and the surrounding bayou throughout the seasons. Community participants will record seasonal observations and on the ground observations that will inform map annotations and research notes shared globally online via Public Lab's online citizen science infrastructure. In-person MapKnitter work sessions will be hosted four times throughout the term of the grant to teach residents how to turn the aerial images they collected into high resolution, annotated maps.

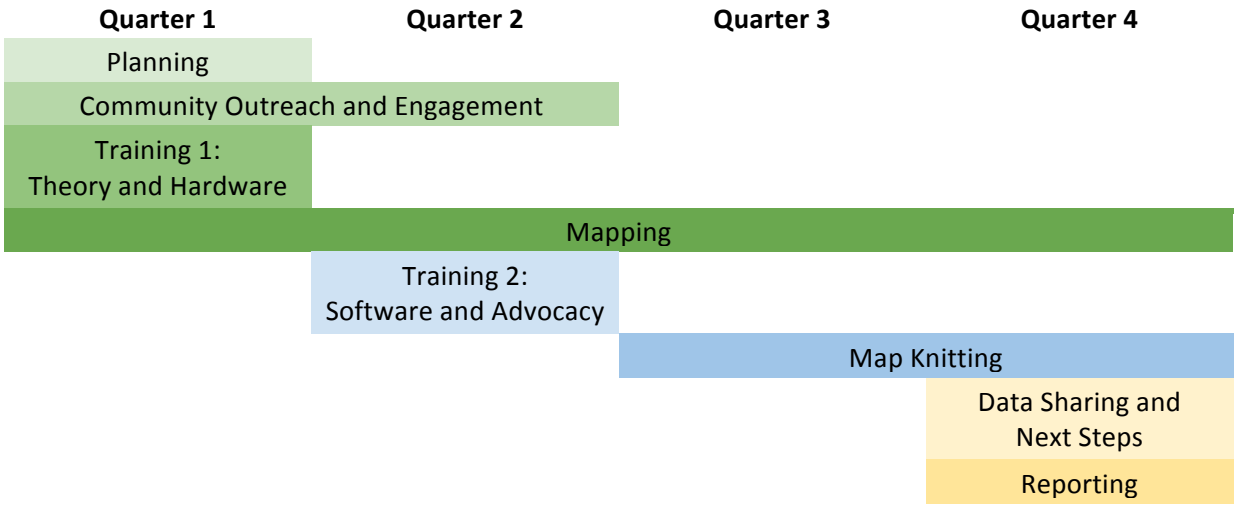
Example, aerial image of Gowanus Canal captured by Public Lab NYC, showing results of sewage infrastructure failure after Hurricane Sandy (*Courtesy of Public Lab contributor, Eymund*).

6. Reporting, data sharing and next steps: The final quarter of the project will be dedicated to final compilation of maps and accompanying narrative

information. The Project Manager and Public Lab Data Ambassador will work with community members to compile a research summary dedicated to findings, best practices, lessons learned, and areas for future research and advocacy. The research summary and maps will be shared online via PublicLab.org as well as in Public Lab's quarterly print publication, Grassroots Mapping Forum (GMF). Additionally, Guardians of the Land and Water will distribute free copies of GMF through their network of community partners and present the research at a local community meeting. Likely distribution points include libraries, community centers, and churches around Grand Bois.

At project completion, a survey will be distributed to participants to determine learning outcomes, best practices, and project improvements. All EPA reporting requirements will be complete per the Grant Agreement under the guidance of Public Lab's Executive Director and Development Director.

Project Timeline



Environmental Results - Outputs and Outcomes

The project's most tangible outputs will be a series of high-resolution, community-created aerial image maps providing visual data on water quality, including clarity, color, and sediment loads at four points in the year, and the sharing of these maps throughout the community. Additionally, through a relationship with Google Earth Outreach, project maps will be published to Google's map platforms, allowing the public at large to navigate through historical imagery of Gulf Coast wetlands. Through this project, residents will gain skills to monitor the environmental health of the bayou in which they live, track industrial runoff associated with high water events, and advocate for safer, healthier communities. They will learn how to effectively use their data to engage with media, academia, regulatory agencies, and industry to work toward solutions that are appropriate and sustainable.

Outputs

- Training materials, including hardware, software, and advocacy components
- Two Workshops, including report outs
- Four mapping sessions in the field
- Four map stitching sessions
- Four completed maps, seasonally, for baseline data
- Mapping during high water events (as applicable)
- Refined monitoring toolkit that can be easily deployed during high water events
- 30 people trained

- Data and story shared via Public Lab print publication (Grassroots Mapping Forum) and online, as well as through appropriate outlets in and around Grand Bois via Guardians of the Land and Water

Outcomes

- Increased education, engagement, and empowerment of local communities, including underserved populations, regarding the health of local waterways and how it relates to community priorities.
- Increased cooperation between environmental advocates and local community around Grand Bois.
- Increased community knowledge and experience in environmental monitoring, advocacy, computer science, and mapmaking.
- Increased capacity of community members to further monitor and recommend ways to improve local waterways as they relate to community priorities.

Relevance to Clean Water Act

As identified in the Clean Water Act, Section 104(b)(3), this project will prepare residents of Grand Bois to carry out community-led investigation and monitoring related to runoff and overflow from an adjacent oil and gas waste and treatment facility. It will equip them with simple, tested tools and techniques to investigate the causes, effects, extent, prevention, reduction, and elimination of water pollution in the bayous surrounding their community using qualitative data collection methods.

Partner Roles and Responsibilities

This project will leverage Public Lab's Gulf Coast roots and innovative technical capacity along with Guardians of the Land and Water's deep knowledge and historical ties to Grand Bois to work for greater accountability of the oil and gas industry in the Gulf Coast. Since its launch in the wake of the BP oil disaster, Public Lab has worked with underserved communities around the world to investigate environmental issues using simple, DIY tools. We have distributed 10,000 citizen science tool kits and have over 5,500 active participants on our global collaboration platform that contribute research notes, help other users solve problems, discuss use cases for tools, and identify needs for future research.

Guardians of the Land and Water Director Clarice Friloux has been working in Grand Bois for two decades to demand greater environmental accountability from the adjacent oil waste treatment site. As an embedded member of the community, Friloux is intimately aware of the impacts R360 has had on Grand Bois residents and has incomparable passion for bringing the issue to a satisfactory close. She also brings close knowledge of local concerns and is trusted by residents, an important factor in working with this small bayou community. As a member of the community working on this issue for two decades, she has a strong vested interest in this project and the passion necessary to see it through.

Public Lab and Guardians of the Land and Water will work collaboratively throughout the project, especially during the planning, outreach, and data sharing portions of the effort. As members of the Grand Bois community, Friloux and Verdin will to be actively involved in the trainings and mappings as participants, so once logistical set-up is complete, they will be free to transition to a participatory role. Public Lab Outreach Manager Ellen Lewis will manage the project and coordinate directly with Friloux and Verdin on project planning and outreach activities. During initial outreach and community engagement, Guardians of the Land and Water will take the lead as they have personal relationships with many local organizations and individuals. Public Lab will lead on technical aspects of the project and will be responsible for online data sharing and all reporting requirements identified by EPA.

We anticipate the partnership having life beyond the scope of this project as the two organizations are currently in the planning phase to launch a pilot program in Grand Bois for use of Public Lab's DIY Oil Test Kit to aid residents in identifying various chemicals found in the bayou surrounding the community.

Public Lab has a commitment to the Gulf Coast at large and is particularly interested in continuing to work with Grand Bois because of the passion of the residents and the critical need presented by R360.

V. Organizational Capacity and Programmatic Capability

Public Lab has a comprehensive program for managing its administrative and financial programs, including a part time Administrative Manager, a part time bookkeeper, and a CPA firm that handles all tax related requirements. The Public Lab team is managed directly by the Executive Director and uses QuickBooks to manage finances. All relevant staff are familiar with Federal requirements, and all administrative and timekeeping policies meet the Federal standard allowing for the appropriate management, expenditure, and accounting of Federal funds.

Public Lab is currently managing an EPA Region 6 Urban Waters grant. Though this is our first Federal award, our diligent administrative and accounting practices, knowledgeable staff, and a proactive relationship with our EPA Project Officer have ensured that the project is progressing as expected. Public Lab staff leverage technology, include shared calendars, project management software, and shared cloud storage, to work collaboratively and ensure appropriate implementation plans are created and met, and that deadlines and project timelines are followed. Additionally, we have successfully managed private grants in amounts from $2,000 to $500,000, meeting all narrative and financial reporting requirements satisfactorily and on time due to the management systems we have in place.

Public Lab will use these same time-tested systems to effectively manage and successfully complete this proposed project. Additionally, we anticipate that we will continue to learn more effective ways to manage Federal projects in the second half of our current EPA Urban Waters agreement. We will employ these lessons to improve practices where necessary to ensure the greatest degree of success in this project.

Public Lab has been working with Gulf Coast communities since 2010 to map and document environmental disasters, ongoing health hazards, and pollution. We have worked successfully with dozens of partners around the world to teach residents how to simply, affordably capture evidence of environmental harms in their communities. As a testament to Public Lab's success, we have earned recognition as a two-time John S. and James L. Knight Foundation News Challenge winner, a recipient of the 2014 Social Venture Network Innovation Award, and as Honorable Mention in the 2013 Buckminster Fuller Institute Challenge.

Past performance on Federal grants

Public Lab is currently operating under an EPA Urban Waters Grant Agreement (FAIN 00F86001) under the guidance of Region 6 Program Officer Virginia Vietti. As the date of the award is 06/25/2014, Public Lab is currently in the process of drafting and submitting its first semi-annual report, and has not yet established a record of past performance on meeting Federal reporting requirements, but looks forward to doing so.

VI. Qualifications of the Project Manager and Other Key Staff

Using her experience managing projects under Federal funds, Public Lab Outreach Manager Ellen Lewis will manage the day-to-day operation of the project. Stevie has worked with Gulf Coast communities and on ecological issues since 2009, including positions as Volunteer Coordinator for the Grand Bay National Estuarine Research Reserve in Mississippi, Resource Advisor for the National Park Service in response to the Deepwater Horizon Oil Spill, and as Watershed Coordinator for the Alliance for Aquatic Resource Monitoring, a non-profit focused on promoting citizen science in aquatics. Stevie has extensive experience in project management including both Federal and private philanthropic funds.

Public Lab Executive Director Shannon Dosemagen will be responsible for project oversight and ensuring the project complies with all EPA requirements. Dosemagen's expertise in community organizing combines fifteen years experience in developing and implementing informal education trainings and workshops in public settings and formal education facilities for learners of all ages. As a community organizer and educator, she plays a key role at Public Lab in site-based outreach, public access to tools and training materials and generated outcomes. Shannon held positions at Louisiana State University as a Community Researcher and Ethnographer on a study about the social impacts of the BP oil spill in coastal Louisiana, and worked at the Louisiana Bucket Brigade conducting the first on-the-ground health and economic impact surveying in Louisiana post-spill.

Guardians of the Land and Water Director Clarice Friloux is a lifelong resident of Grand Bois, Louisiana and a member of the United Houma Nation. Since 1994, Clarice has worked with the Concerned Citizens of Grand Bois and the Louisiana Environmental Action Network to fight for better regulations against the 140-acre oil waste facility, located less than a ½ mile from her community. During the 2010 BP Drilling Disaster, the United Houma Nation sent her into southeast Louisiana's American Indian communities to facilitate as Outreach Coordinator. Additionally, since the late 1990's, she has worked as a community partner with the University of Arizona's Bureau of Applied Research in Anthropology on social studies concerning the effects of the offshore petroleum industry. She serves as a member of the executive board for Catholic Charities in the Houma-Thibodaux Diocese and is also an active member of the Louisiana Environmental Action Network board. Danny Friloux, Clarice's husband, and Clarice formed the Guardians of the Land and Water in 2012 as a renewed effort and commitment to continue their environmental justice work in Grand Bois and beyond. She currently works for the Intertribal Council of Louisiana.

Monique Verdin is a native daughter of southeast Louisiana's Houma Nation and will assist Guardians of the Land and Water with community outreach and engagement under this project. Her multi-disciplinary documentation offers an intimate window into Louisiana's indigenous communities, exposing the complex interconnectedness of environment, economics, culture, climate and change. *My Louisiana Love* (2012) is a personal documentary narrative about Verdin's life, exposing a centuries old story of loss and resilience in the Mississippi River Delta. Her photography has been exhibited nationally and internationally, and is included in *Unfathomable City: A New Orleans Atlas, University of California* (2013,) *The Good Pirates of the Forgotten Bayous, Yale University Press* (2008) and *Nonesuch Records'* Habitat for Humanity benefit album *Our New Orleans* (2005.) From 2012 to 2013, she worked with the United Houma Nation as a youth assistant. Verdin served as a community partner, in 2013, during the most recent phase of the University of Arizona's Bureau of Applied Research in Anthropology "Deepwater Horizon Social Impact Study," commissioned by the Bureau of Ocean Energy Management.

VII. Past Performance in Reporting on Outputs and Outcomes

Current Federal Grants

Grant Number: 00F86001
Title: Citizen-led Monitoring of Urban Wetlands
Amount: $52, 185
Agency: EPA Urban Water Program
Point of Contact: Virginia Vietti, vietti.virginia@epa.gov, 214-665-7431

Past Performance

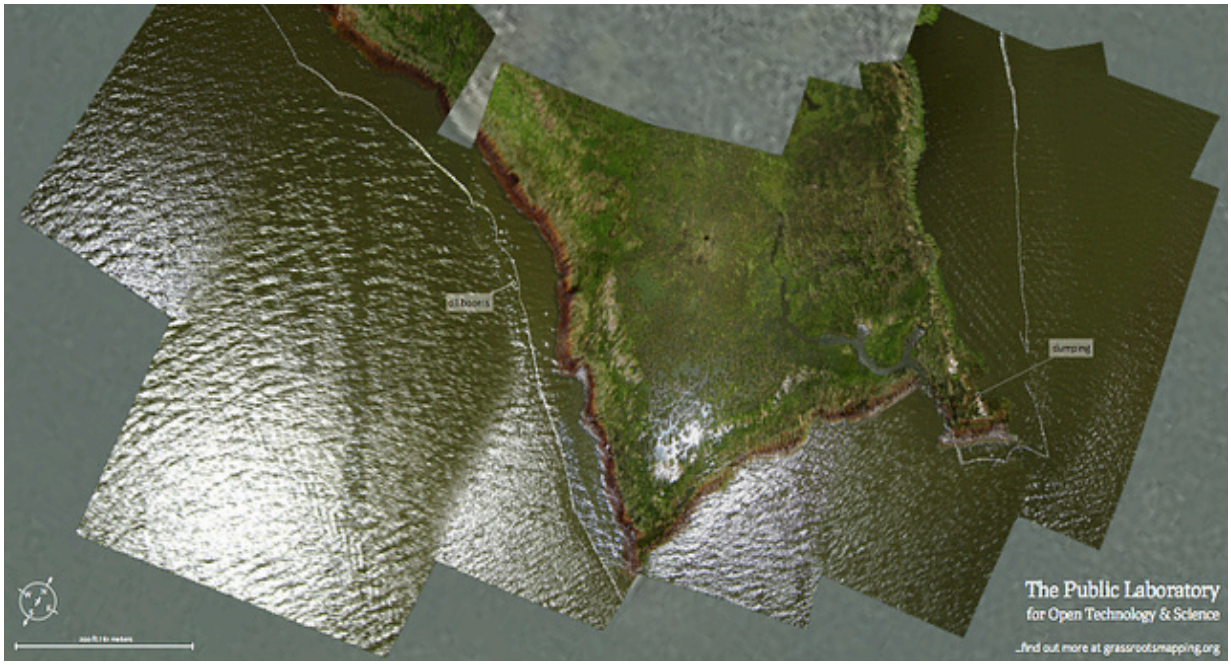
Public Lab diligently follows all reporting requirements and timelines set out in assistance agreements. Progress toward achieving expected outcomes and outputs is shared with funders and project partners as agreed upon. Notable examples of exemplary past performance include the following:

Knight News Challenge-Journalism and Media Innovation: Public Lab received a $500,000 grant from the John S. and James L. Knight Foundation Knight News Challenge in June 2011, to advance new forms of civic media through tool and site development. This funding has been leveraged to develop an online platform for community-generated data, open source tools and citizen science techniques. Public Lab met all requirements satisfactorily, including final technical and financial reports. An annual report and metrics were submitted at the end of year one, and a final report and metrics were submitted at the close of the grant. Regular meetings with the funder were held to discuss project strategy, building on successes, and overcoming roadblocks. Due to the success of this project and the merit of the Public Lab approach to community-led environmental monitoring, Public Lab was awarded an additional grant from the John S. and James L. Knight Foundation in the amount of $350,000 in January 2014.

Patagonia Small Grants Program: In August 2012, Public Lab received a $9,000 from Patagonia clothing company to support ongoing monitoring of ecological recovery efforts of the Barataria wetlands area, a socially and ecologically important region of the Gulf Coast impacted by the BP oil spill. This project empowered community members to monitor restoration and recovery efforts as settlement funds came into the region, and made publically available high-resolution maps of this important area. Public Lab met all reporting requirements associated with this grant satisfactorily, including publication and distribution of print materials in the Gulf Coast, using work plans, budgets, goals and milestones

VIII. Quality Assurance Project Plan (QAPP) Information

Public Lab has an approved QAPP for its aerial mapping data collection technique through a 2014 EPA Urban Waters grant. Our field methodology generates aerial imagery in visible bands. Through georeferencing on the mapknitter.org platform, these high-resolution aerial images combine the visual attributes of an aerial photograph with the spatial accuracy and reliability of a planimetric map. The maps created through this project will also have a high temporal resolution, as they are collected on an approximately quarterly basis. Public Lab's own archive (http://publiclab.org/archive) is modeled after data.gov and provides online storage and sharing capabilities. As similar data will be collected in this effort, we believe a similar QAPP will be required.



Volunteer-made map of Wilkinson Bay, LA following the BP oil spill. Similar maps will be created through this project. (Public Lab 2010).